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#### REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

#### Status of Claims

Claims 1 - 16 remain pending in the application. Claims 5 - 12 and 16 have been allowed. Claims 1 - 4 and 13 - 15 have been rejected. Claims 1 and 13 have been amended to more clearly define the subject matter claimed by the present Application. This amendment is not being made for reasons of patentability. New claims 17 and 18 were added in order to define more clearly the subject matter claimed by the present Application. Applicants respectfully assert that the amendments and new claims do not add any new matter.

#### Allowable Subject Matter

Applicants would like to thank the Examiner for allowing claims 5 - 12 and 16.

#### CLAIM REJECTIONS

##### 35 U.S.C. § 102 Rejections

Claims 1-3 and 13-15 were rejected under 35 U.S.C. § 102(e), as being anticipated by Luschi et al. (US 6,539,067). Applicants respectfully traverse the rejection in view of the remarks that follow.

In order for a reference to anticipate a claim, the reference must teach every element of the claim. Applicant asserts that Luschi does not teach every element of Applicant's independent claims 1 and 13 as amended.

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Amended claim 1 recites "a channel estimator to generate a maximum likelihood estimate of one or more channel taps from an equation involving ... a priori probabilities of transmitted symbols in one or more samples of a received signal, wherein the a priori probabilities are based on type of the transmitted symbols ... wherein said equation is an implicit equation ...".

Amended claim 13 recites "generating a maximum likelihood estimate of one or more channel taps from an equation involving a) said one or more channel taps, b) a priori probabilities of transmitted symbols in one or more samples of a received signal, wherein the a priori probabilities are based on type of the transmitted symbols, and c) one or more noise samples, wherein said equation is an implicit equation for said one or more channel taps".

Luschi is directed to a method of estimating channel impulse response in a signal transmitted over a channel in a communication system. The channel estimator uses a posteriori probability calculated using MAP algorithm as a priority knowledge of the transmitted signal (see abstract and col. 3, lines 26-29, emphasis added). It should be noted that, contrary to the Office action contention, equation 2 of Luschi is not an implicit equation and furthermore a priori probabilities are not used in equation 2.

Accordingly, Luschi does not teach at least "generate/ing a maximum likelihood estimate of one or more channel taps from an equation involving a) said one or more channel taps, b) a priori probabilities of transmitted symbols in one or more samples of a received signal, wherein the a priori probabilities are based on type of the transmitted symbols", as recited by amended claims 1 and 13. Applicant therefore asserts that independent claims 1 and 13 are allowable over Luschi.

Each of dependent claims 2-3 and 14-15 depends, directly or indirectly, from one of independent claims 1 and 13, and includes all the features of the claim from which it depends as well as additional distinguishing features, and is therefore allowable.

Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1-3 and 13-15 under 35 U.S.C. § 102(e), as being anticipated by Luschi.

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### 35 U.S.C. § 103 Rejections

Claim 4 was rejected under 35 U.S.C. § 103(a), as being unpatentable over Bjork et al. (US 6,084,862) in view of Luschi et al. (US 6,539,067).

An obviousness rejection requires a teaching or a suggestion by the relied upon prior art of all the elements of a claim (M.P.E.P. §2142).

Without conceding the appropriateness of the combination, Applicants respectfully submit that the combination of Bjork and Luschi does not meet the requirements of an obviousness rejection, in that the combination fails to teach or suggest all the elements of the claimed invention.

As discussed above, independent claim 1 is patentable over Luschi. Bjork does not cure the deficiencies of Luschi. Dependent claim 4 depends from claim 1 and includes all the features of the claim as well as additional distinguishing features, and is therefore allowable.

In view of the above, Applicants respectfully request that the rejection under 35 U.S.C. §103(a) of claim 4 be withdrawn.

### CONCLUSION

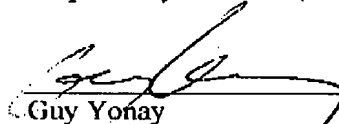
In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

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Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,



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Dated: September 30, 2007

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